(12) EUROPEAN PATENT APPLICATION
published in accordance with Art. 158(3) EPC
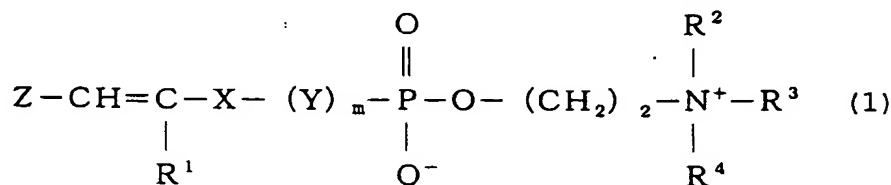
(72) Inventors:
• NAKABAYASHI, Nobuo
Chiba 270 (JP)
• ISHIHARA, Kazuhiko
Tokyo 187 (JP)
• SHUTO, Kenshiro
Ibaraki 300-32 (JP)
• MATSUYAMA, Kazuo
Ibaraki 305 (JP)

(74) Representative: Hallybone, Huw George et al
CARPMAELS AND RANSFORD
43 Bloomsbury Square
London WC1A 2RA (GB)

(54) PROCESS FOR PRODUCING AN AQUEOUS SOLUTION OF PHOSPHORYLCHOLINE GROUP BEARING POLYMER AND AQUEOUS SOLUTION OF PHOSPHORYLCHOLINE GROUP BEARING POLYMER

(57) A method for producing an aqueous solution of a polymer having a phosphorylcholine group in which a polymerizable composition containing a polymerizable monomer having the phosphorylcholine group represented by the formula (1) is polymerized in the presence of a non-metal polymerization initiator soluble in a water-containing medium, to obtain a crude polymer aqueous solution, and the crude polymer aqueous solution is purified with a separation membrane, and an aqueous solution of the polymer having the phosphorylcholine group obtained by the method and having not more than 2000ppm of impurities.

$$Z-CH=\underset{\underset{R^1}{|}}{C}-X-(Y)_m-\underset{\underset{O^-}{|}}{\overset{\overset{O}{\|}}{P}}-O-(CH_2)_2-\underset{\underset{R^4}{|}}{\overset{\overset{R^2}{|}}{N^+}}-R^3 \quad (1)$$

(X: a divalent organic residue, Y: an alkyleneoxy group having C1 to 6, Z: H, R^5-O-CO-(R^5: an alkyl group of C1 to 10), R^1:H, CH_3, R^2, R^3, R^4: H, a hydrocarbon group or a hydroxy substituted hydrocarbon group of C1 to 6, m; 0 or 1)

EP 0 767 212 A1